

ABSTRACT OF THE DISCLOSURE

Interference caused by the propagation of a transmit signal transmitted from a transmit antenna to a receive antenna is effectively cancelled by an improved signal cancellation system. The system includes an interference cancellation signal generator that generates a time-delayed and amplitude-reduced representation of said transmit signal. A summing stage is operably coupled to the interference cancellation signal generator and the receive antenna. The summing stage subtracts the time-delayed and amplitude-reduced representation of the transmit signal from a receive signal to substantially cancel the interference. The interference cancellation signal generator preferably includes a novel programmable optical delay line that introduces a variable amount of optical delay to an optical signal derived from said transmit signal in addition to a thyristor-based sigma delta modulator that converts samples of the transmit signal to into a digital signal in the optical domain.